

What is claimed is:

1. - 6. (Canceled)

7. (New) A cold cathode ionization manometer for measuring pressure
5 in a vacuum and operating on the magnetron principle, comprising:

a vacuum-proof housing provided at one end thereof with a flanged
opening for selectively admitting measuring gas;

a first cathode of substantially tubular configuration mounted in the
housing adjacent the opening thereof;

10 a second cathode of substantially tubular configuration mounted in the
chamber axially offset and electrically insulated from the first cathode; and

an elongated anode mounted in the housing substantially coaxially
relative to and penetrating the first and second electrodes.

15 8. (New) The manometer of claim 7, further comprising means for
electrically energizing the anode.

9. (New) The manometer of claim 8, wherein the means for electrically
energizing the anode comprises a voltage source selectively switchable
20 between alternating and constant voltage.

10. (New) The manometer of claim 9, further comprising means for
switching the voltage source in response to the level of pressure within the
housing.

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11. (New) The manometer of claim 8, wherein in response to pressure in
the housing in excess of 10^{-2} Pa the anode is energized by alternating
voltage.

30 12. (New) The manometer of claim 7, further comprising means for
electrically energizing the first and second cathodes.

13. (New) The manometer of claim 12, wherein the first cathode is electrically grounded by the housing.
14. (New) The manometer of claim 12, further comprising means
5 connected to the second cathode for measuring discharge current as a function of pressure in the housing.
15. (New) The manometer of claim 14, wherein the second cathode is grounded by way of the current measuring means.
- 10 16. (New) The manometer of claim 7, wherein the first and second cathodes are provided with end surfaces forming apertures therein for receiving the anode.
- 15 17. (New) The manometer of claim 16, wherein at least one of the apertures is dimensioned to form a predetermined flow resistance to contaminating gases.
18. (New) The manometer of claim 7, further comprising means for
20 replaceably mounting at least one of the first and second cathodes.
19. (New) The manometer of claim 18, wherein the mounting means comprises a snap ring.
- 25 20. (New) The manometer of claim 12, wherein the means for electrically energizing the second cathode comprises at least one vacuum-proof insulated conduit extending through the housing and provided with a vaporization protection.
- 30 21. (New) The manometer of claim 7, wherein the anode is mounted in the housing by a vacuum proof threaded connection.